

Use of Listeria and Listeria vectors

Purpose:

To provide guidance for the use of Listeria and Listeria vectors in the laboratory and animal facility environment.

Guidance Information:

Several factors should be considered when working with Listeria or Listeria vectors, including containment and handling large volumes or high concentrations. Listeria is considered Risk Group 2. Pregnant women and elderly, young, and immunocompromised persons are at greater risk of infection.

Precautions:

1. Personal Protective Equipment (PPE) Required: Lab coat, gloves (standard nitrile or latex) and safety glasses. When working outside of containment, an N95 respirator* and goggles are worn. *Respirator use requires medical clearance and fit testing through Occupational Medicine.
2. Laboratory: BSL-2 is required for administration and handling of Listeria. A BSC (biosafety cabinet) or full mucosal protection is required anytime there is danger of aerosolization.
3. Animal housing and bedding/wastes:
 - a. Animals should be housed in microisolator or similar containment caging.
 - b. A biological safety cabinet (BSC) is needed when opening cages and handling animals.
 - c. ABSL 2 signage is required to be posted on the housing and procedure room where this material is present.
 - d. Cage labels are required on each individual cage containing the biohazard symbol and "Agent, end date (if applicable) and disposal method". Cage labels are removed or crossed out when special handling time has ended. *Cage labels available at www.ehs.wisc.edu
 - e. Decontamination of animal waste, caging and any other contaminated equipment is required before disposal. Autoclaving or a suitable chemical disinfectant is used prior to disposal into standard waste streams. Caging must be either bagged into biohazard bags for transport to the autoclave or must remain sealed during transport and at all times prior to autoclaving. It is recommended that cage racks be treated with disinfectant prior to removal from animal room.

References:

“Biosafety in Microbiological and Biomedical Laboratories”, Centers for Disease Control and Prevention, current edition.

<https://www.cdc.gov/labs/bmbl/index.html>

“NIH Guidelines for Research Involving Recombinant and Synthetic Nucleic Acid Molecules”, National Institutes of health, current edition. https://osp.od.nih.gov/wp-content/uploads/NIH_Guidelines.pdf

Pathogen Safety Data Sheet- Infectious Substances “Listeria monocytogenes”, Public Health Agency of Canada.

<http://www.phac-aspc.gc.ca/lab-bio/res/psds-ftss/listeria-monocytogenes-eng.php>